Cutaneous Fungal Infections: Dermatophytoses

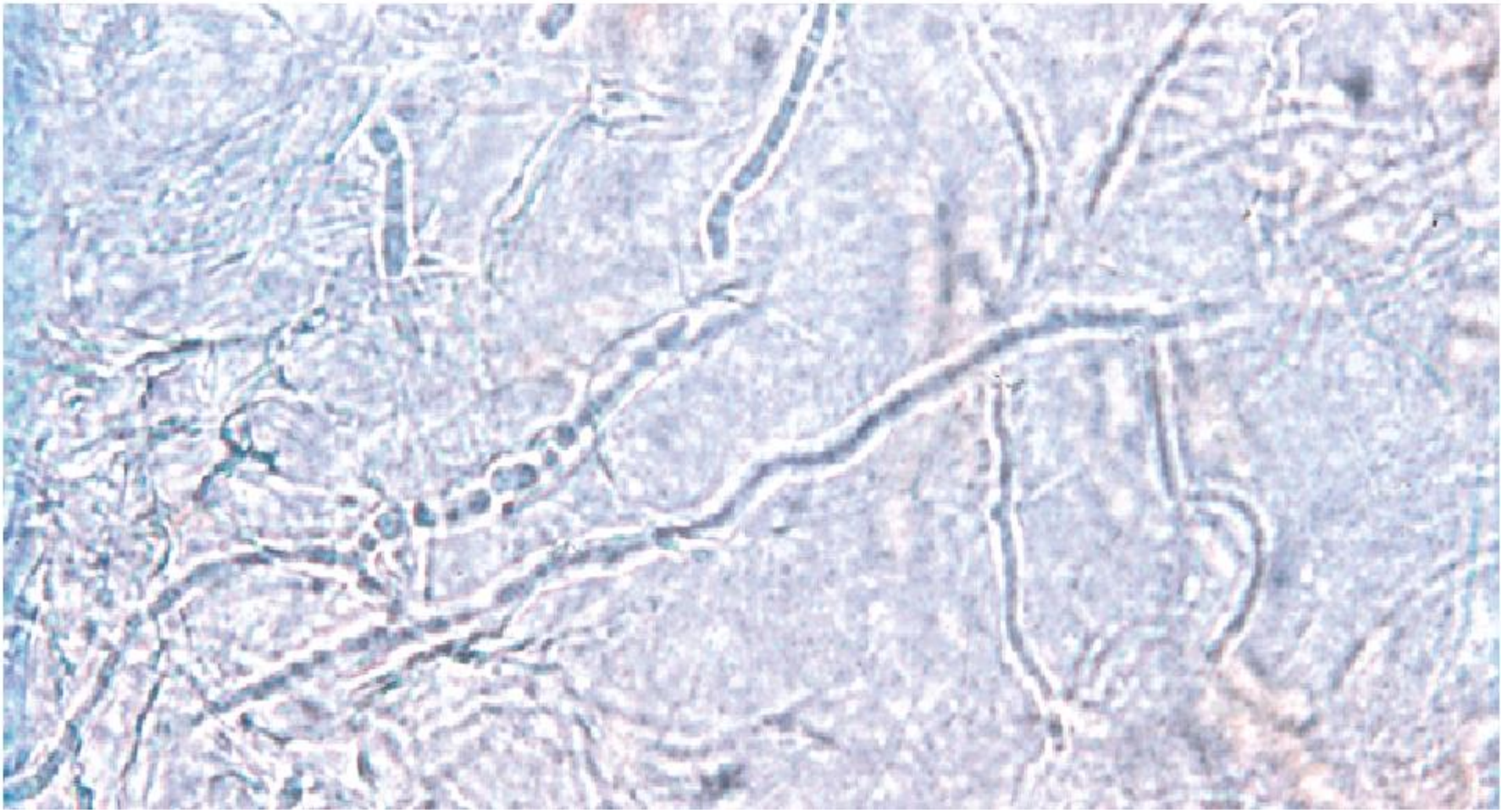

Figure 25-2 Potassium hydroxide (KOH) preparation Multiple, septated, tubelike structures (hyphae or mycelia) and spore formation in scales obtained from an individual with epidermal dermatophytosis. In contrast, KOH preparation in candidiasis shows elongated yeast forms (pseudohyphae) without true septations.

Figure 25-3 Tinea pedis: interdigital type
Scaling, maceration, erythema, and erosion in the webspace between the fourth and fifth toes; tinea unguium of the toenail of the fourth toe is also present.

Figure 25-4 Tinea pedis: mocassin type
Erythema, fine white scaling of the plantar and lateral foot, and keratoderma (thickening of the keratin layer); the arciform pattern of scaling is characteristic. The multiple brown macules are incidental findings and represent progressive pigmentary purpura (Schamberg's disease).

Figure 25-5 Tinea pedis: bullous type Vesicles, bullae, erythema, fine scaling, and erosion on the plantar foot. Hyphae were detected on KOH preparation obtained from the roof of the inner aspect of the large bulla.

Figure 25-6 Tinea manuum Erythema and scaling (seen best in the skin folds) of the right hand, which was associated with bilateral tinea pedis; the "one hand, two feet" distribution is typical of epidermal dermatophytosis of the hands and feet.

Figure 25-7 Tinea cruris Erythematous, scaling plaques on the medial thighs, inguinal folds, and pubic area; areas of clearing are seen within the large plaques. The margins are raised and sharply marginated.

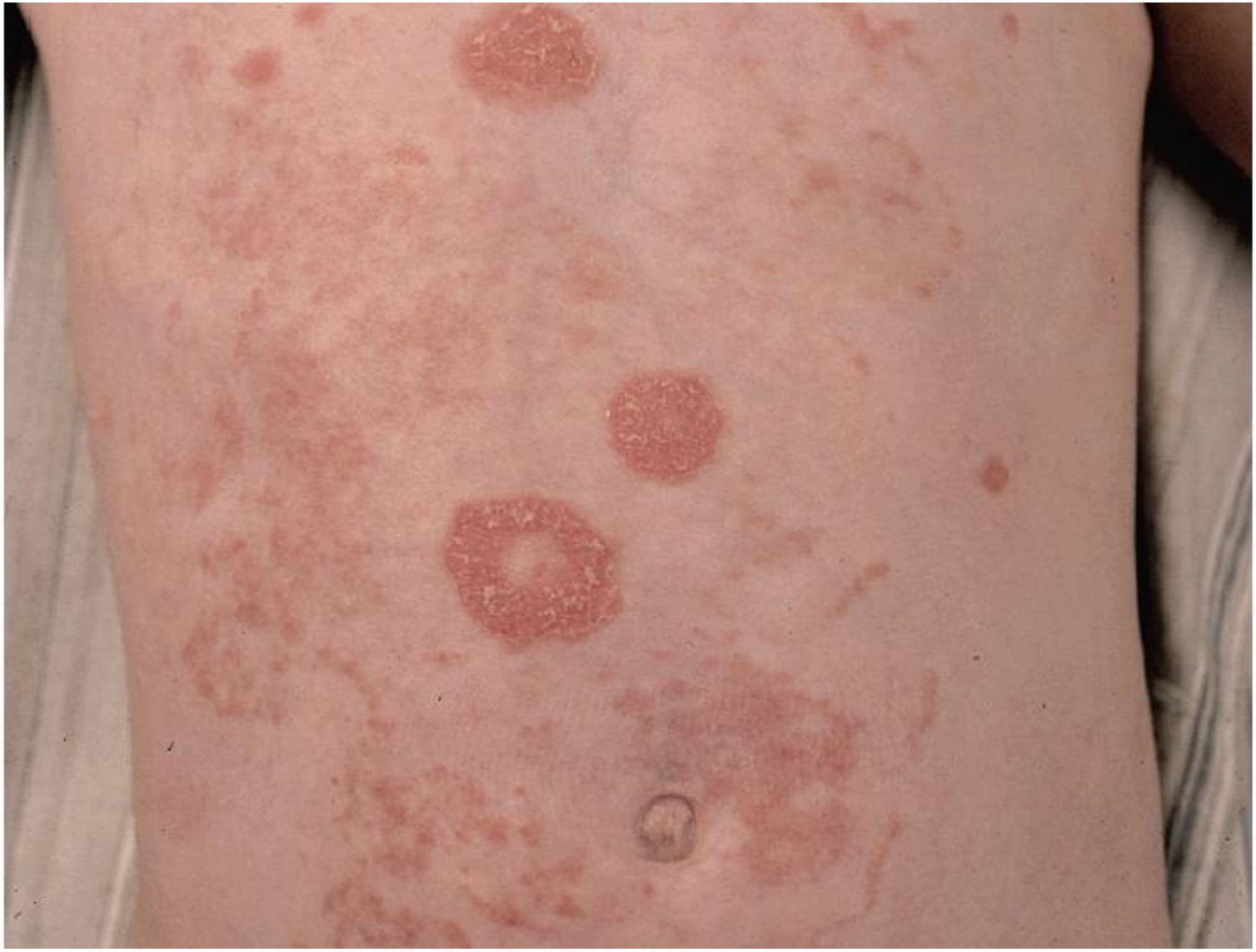

Figure 25-8 Tinea corporis Multiple, bright red, sharply marginated lesions with only minimal scaling of several weeks duration on the trunk of a child. Three lesions are more inflammatory and thicker. *Microsporum canis* was isolated on fungal culture, which had been contracted from a pet guinea pig.

Figure 25-9 Tinea corporis Sharply marginated, hyperpigmented plaques of many months duration on the back, buttocks, and thighs; scaling that gives the lesion the appearance of psoriasis. Associated tinea cruris and tinea pedis are usually present.

Figure 25-10 Tinea facialis Sharply marginated, erythematous plaque with some central clearing and peripheral scaling on the lower eyelid and cheek of a young woman. Clinically, the lesion can be mistaken for chronic cutaneous (discoid) lupus erythematosus.

Figure 25-11 Tinea facialis Sharply marginated, erythematous, scaling, and crusted plaques on the face of a child. Note asymmetry.

Figure 25-12 Tinea capitis: "gray patch" type A large, round, hyperkeratotic plaque of alopecia due to breaking off of hair shafts close to the surface, giving the appearance of a mowed wheat field on the scalp of a child. Remaining hair shafts and scales exhibit a green fluorescence when examined with a Wood's lamp. *Microsporum canis* was isolated on culture.

Figure 25-13 Tinea capitis: "black dot" variant A subtle, asymptomatic patch of alopecia due to breaking off of hairs on the frontal scalp in a 4-year-old black child. The lesion was detected because her infant sister presented with tinea corporis. *Trichophyton tonsurans* was isolated on culture.

Figure 25-14 Tinea capitis: kerion type Large, very painful, inflammatory tumor with hair loss, studded with multiple pustules on the scalp of a young child. Pressure on the lesion cause pus to discharge from multiple openings in a honeycomb pattern (*kerion* is the Greek term for honeycomb).

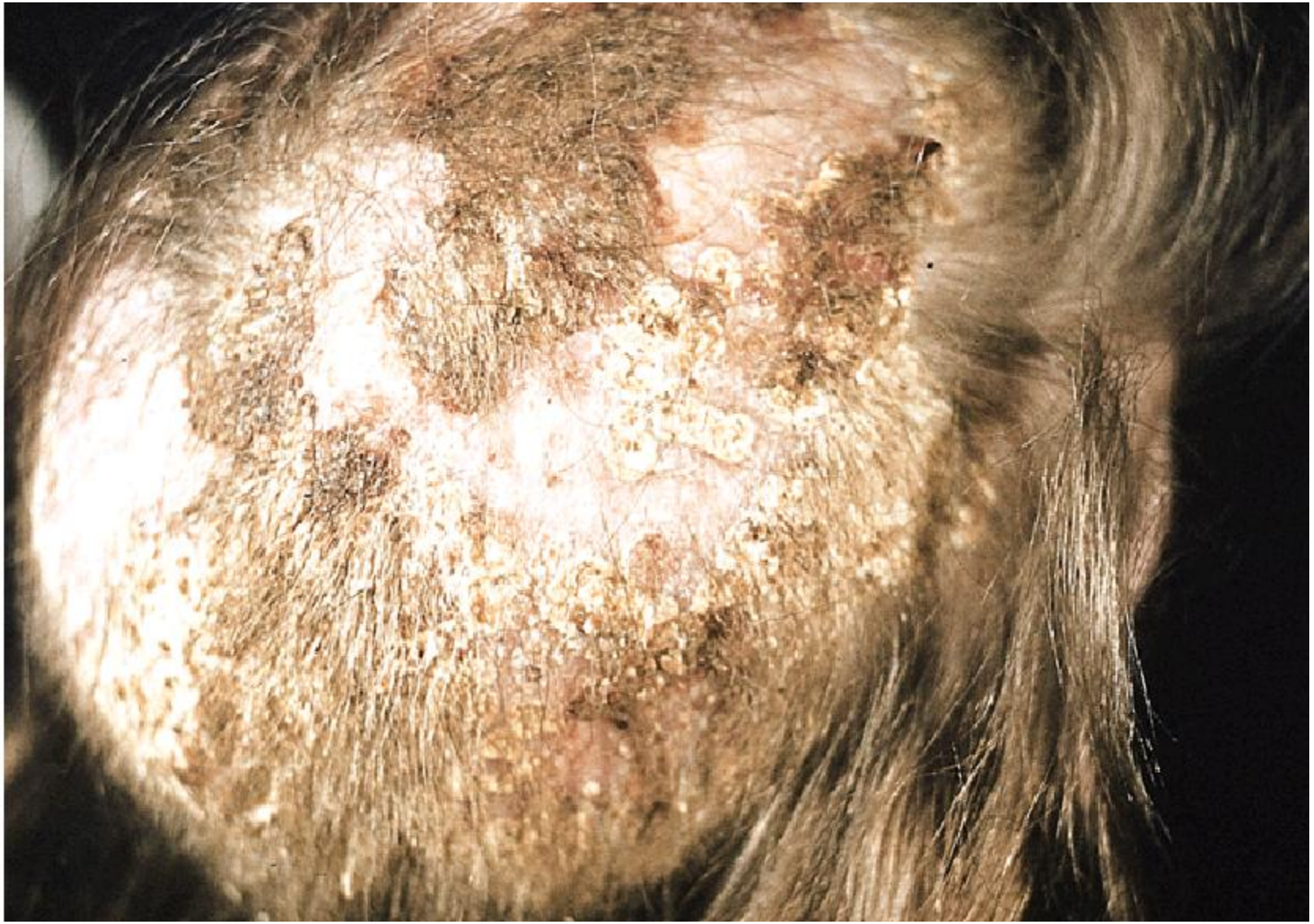

Figure 25-15 Tinea capitis: favus Extensive hair loss with atrophy, scarring, and so-called scutula, i.e., yellowish adherent crusts present on the scalp; remaining hairs pierce scutula. *Trichophyton schoenleinii* was isolated on culture.

Figure 25-16 Tinea barbae Scattered, discrete follicular pustules and papules in the moustache area, easily mistaken for *S. aureus* folliculitis.

Figure 25-17 Tinea barbae and tinea facialis Confluent, painful papules, nodules, and pustules on the upper lip. Epidermal dermatophytosis (tinea facialis) with sharply marginated erythema and scaling is present on the cheeks, eyelids, eyebrows, and forehead. *Trichophyton mentagrophytes* was isolated on culture. In this case, the organism caused two distinct clinical patterns (epidermal involvement, tinea facialis versus follicular inflammation, tinea barbae) depending on whether glabrous skin or hairy skin is infected.

Figure 25-18 Onychomycosis of toenails: distal and lateral subungual type Distal subungual hyperkeratosis and onycholysis involving most of the nail bed of the great toenails; these findings are usually associated with tinea pedis.

Figure 25-19 Onychomycosis of fingernails: distal and lateral subungual type Distal onycholysis with subungual hyperkeratosis on two fingernails; the nail plates are relatively preserved. Associated tinea manuum with scaling and erythema is also present.

Figure 25-20 Tinea unguium: proximal subungual onychomycosis type The proximal nail plate is a chalky white color due to invasion from the undersurface of the nail matrix. The patient had advanced HIV disease.

Figure 25-21 Onychomycosis: total dystrophic type The entire fingernail plate is thickened and dystrophic and is associated with a paronychial infection; both findings were caused by *Candida albicans* in an individual with advanced HIV disease.

Figure 25-22 Cutaneous candidiasis: intertrigo Small peripheral "satellite" papules and pustules that have become confluent centrally creating large eroded area in the inframammary area.

Figure 25-23 Cutaneous candidiasis: intertrigo Erosions on the medial thighs, inguinal folds, and scrotum with "satellite" pustules and papules of an obese male.

Figure 25-24 Cutaneous candidiasis: interdigital Erythematous eroded area with surrounding maceration in a webspace of the hand occurring in a health care worker is a type of intertrigo.

Figure 25-25 Candidiasis: balanoposthitis Multiple, discrete pustules on the glans penis and inner aspect of the foreskin (the preputial sac). The "umbilicated" lesions can be mistaken for genital herpes, molluscum contagiosum, or condyloma acuminata.

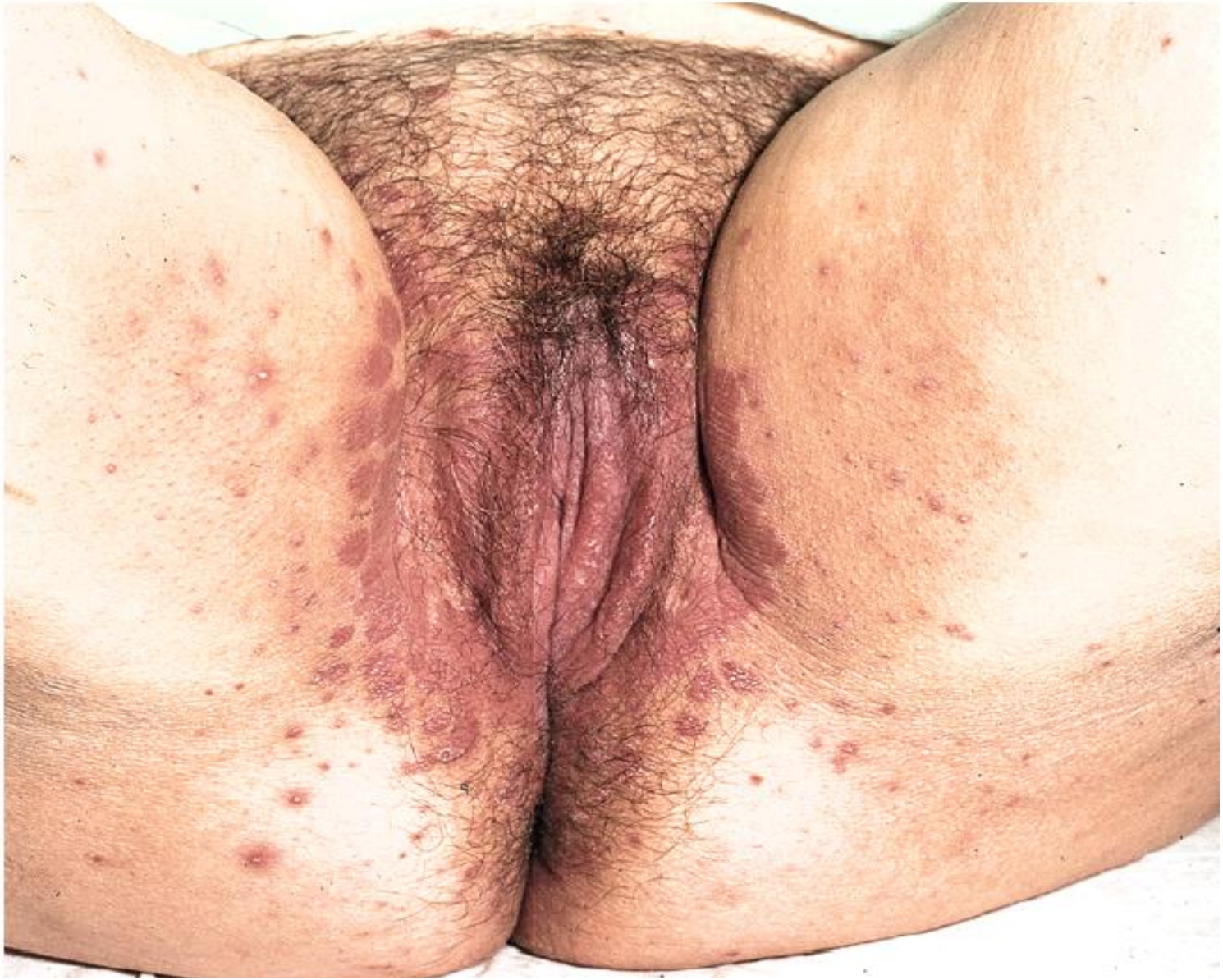

Figure 25-26 Candidiasis: vulvitis Psoriasiform, erythematous lesions becoming confluent on the vulva with erosions and satellite pustules on the thighs.

Figure 25-27 Candidiasis: diaper dermatitis Confluent erosions, marginal scaling, and "satellite pustules" in the area covered by a diaper in an infant.

Cutaneous Fungal Infections: Candidiasis

Figure 25-28 Candida paronychia Painful, paronychial erythema and edema with pus exuding from under the proximal nail fold. Transverse grooves on the nail plate chronical prior episodes of infection. *Candida* paronychia, which is an infection of the space between the undersurface of the cuticle and the proximal dorsal nail plate, is often mistaken for *S. aureus* paronychia, an infection of the paronychial tissue itself.

Figure 25-29 Candida paronychia, onychia, and onycholysis Paronychial erythema and edema with proximal, as well as distal, onycholysis and onychodystrophy. The green-brown color was caused by *Pseudomonas aeruginosa* superinfection of the diseased nails. The patient was immunosuppressed following organ transplantation.

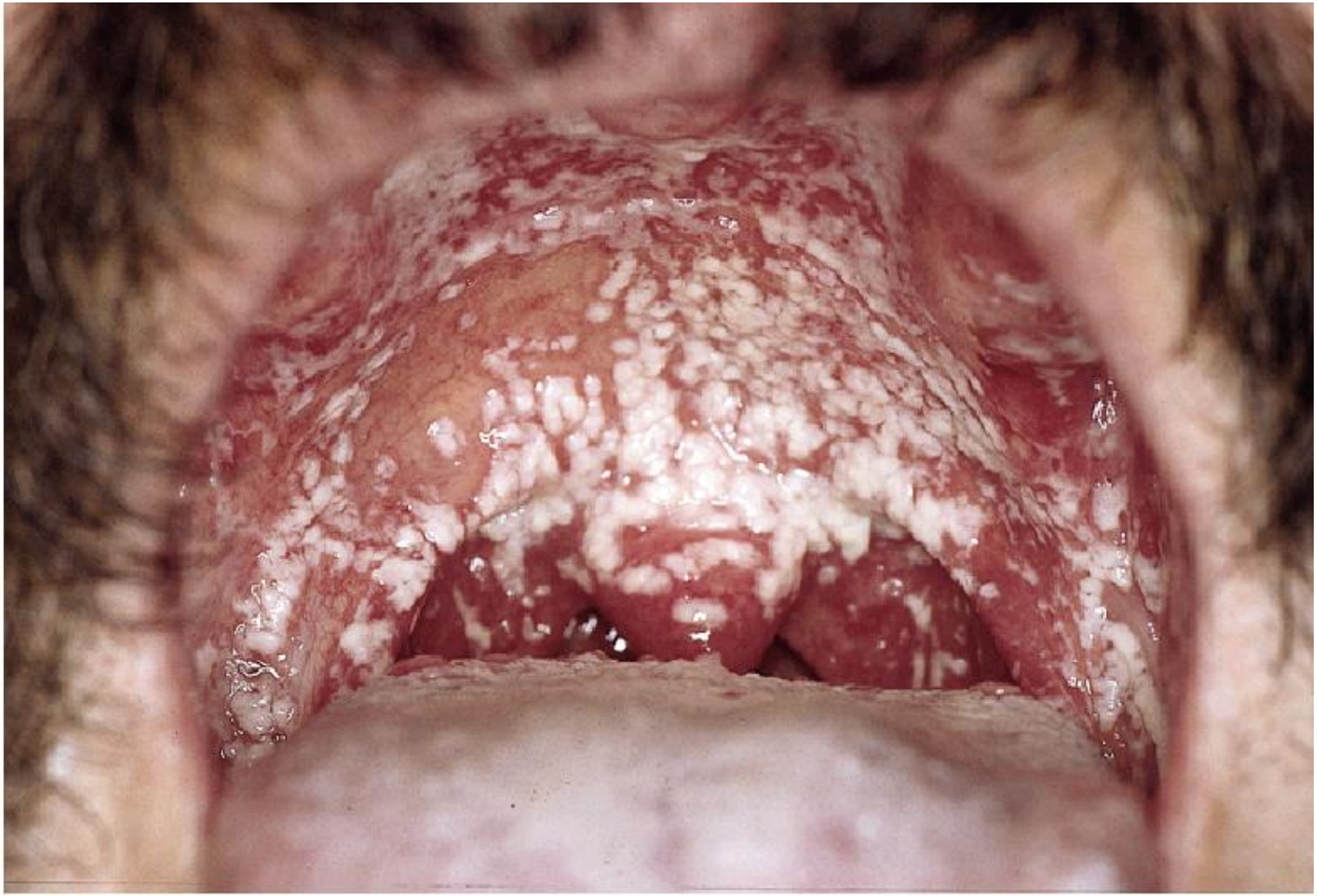

Figure 25-30 Mucosal candidiasis: thrush Extensive cottage cheese-like plaques, colonies of *Candida* that can be removed by rubbing with gauze, on the palate and uvula of an individual with advanced HIV disease. Patches of erythema between the white plaques represent erythematous (atrophic) candidiasis. Involvement may extend into the esophagus and be associated with dysphagia.

Figure 25-31 Mucosal candidiasis: angular cheilitis Erythema and erosion at the commissures of the lips were associated with oropharyngeal candidiasis in an HIV-infected individual.

Figure 25-32 Pityriasis versicolor Hypopigmented, sharply marginated, scaling macules on the shoulder area of an individual with brown skin. Gentle abrasion of the surface accentuates the scaling.

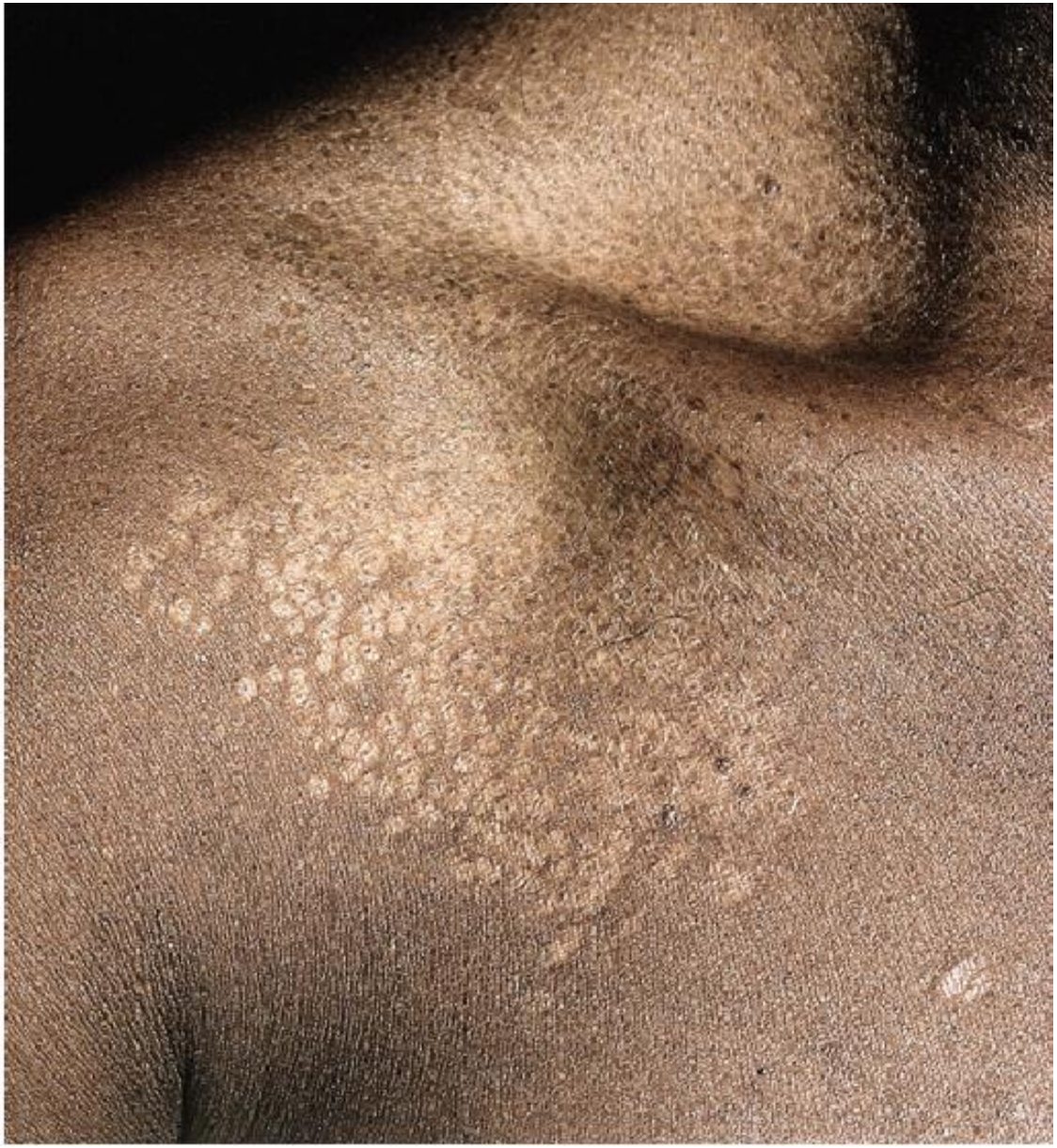

Figure 25-33 Pityriasis versicolor Follicular, hypopigmented macules on the upper chest of an individual with black skin.

Cutaneous Fungal Infections: Pityriasis Versicolor

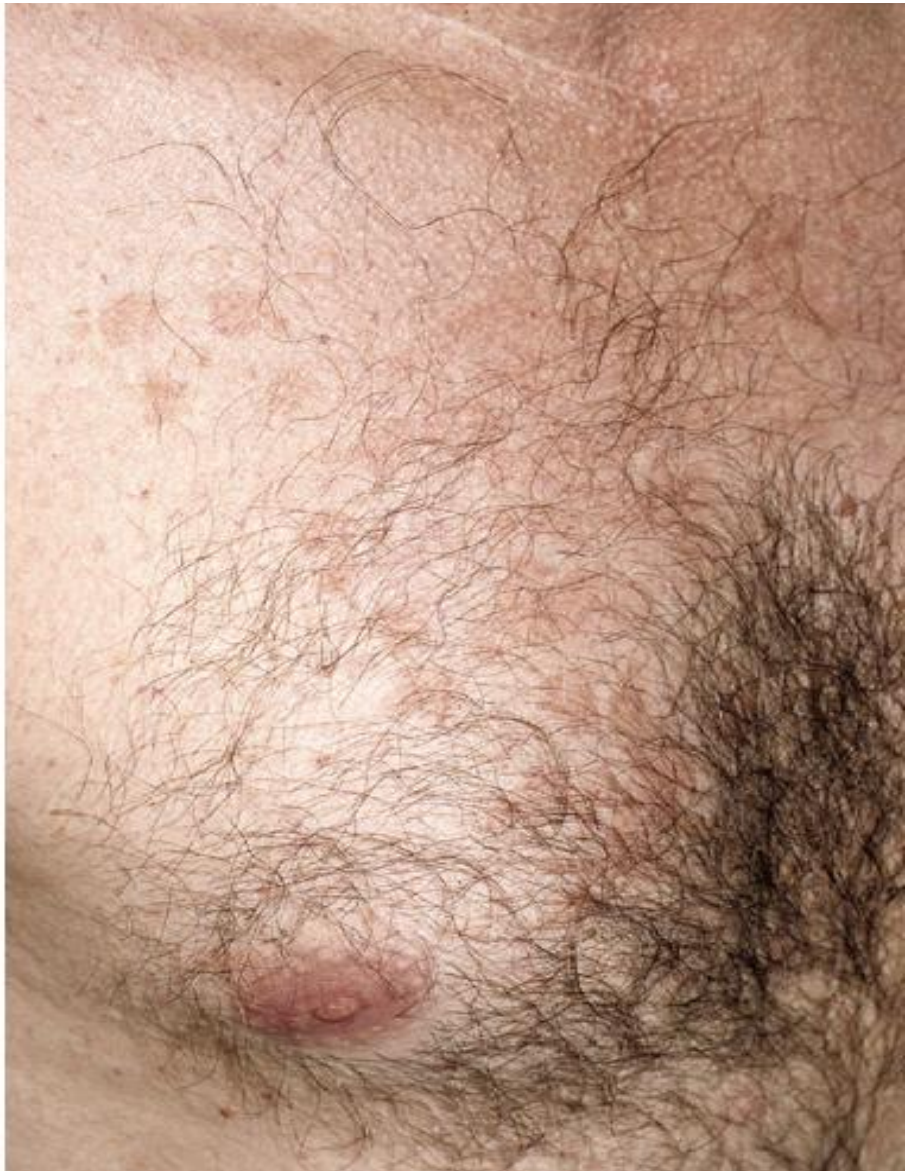

Figure 25-34 Pityriasis versicolor Pink-tan macules on the chest of an individual with white skin are difficult to visualize and are often overlooked during physical examination.